

AMENDMENT OF SOLICITATION/MODIFICATION OF CONTRACT			1. CONTRACT ID CODE	PAGE OF PAGES
			J	1 15
2. AMENDMENT/MODIFICATION NO. 0001	3. EFFECTIVE DATE 10-May-2004	4. REQUISITION/PURCHASE REQ. NO. W81W3G-4091-4010		5. PROJECT NO.(If applicable)
6. ISSUED BY USAED - BALTIMORE 10 SOUTH HOWARD STREET BALTIMORE MD 21201	CODE W912DR	7. ADMINISTERED BY (If other than item 6) See Item 6		
8. NAME AND ADDRESS OF CONTRACTOR (No., Street, County, State and Zip Code)		X	9A. AMENDMENT OF SOLICITATION NO. W912DR-04-T-0061	
		X	9B. DATED (SEE ITEM 11) 26-Apr-2004	
			10A. MOD. OF CONTRACT/ORDER NO.	
			10B. DATED (SEE ITEM 13)	
CODE	FACILITY CODE			
11. THIS ITEM ONLY APPLIES TO AMENDMENTS OF SOLICITATIONS				
<input checked="" type="checkbox"/> The above numbered solicitation is amended as set forth in Item 14. The hour and date specified for receipt of Offer <input checked="" type="checkbox"/> is extended, <input type="checkbox"/> is not extended. Offer must acknowledge receipt of this amendment prior to the hour and date specified in the solicitation or as amended by one of the following methods: (a) By completing Items 8 and 15, and returning <u>1</u> copies of the amendment; (b) By acknowledging receipt of this amendment on each copy of the offer submitted; or (c) By separate letter or telegram which includes a reference to the solicitation and amendment numbers. FAILURE OF YOUR ACKNOWLEDGMENT TO BE RECEIVED AT THE PLACE DESIGNATED FOR THE RECEIPT OF OFFERS PRIOR TO THE HOUR AND DATE SPECIFIED MAY RESULT IN REJECTION OF YOUR OFFER. If by virtue of this amendment you desire to change an offer already submitted, such change may be made by telegram or letter, provided each telegram or letter makes reference to the solicitation and this amendment, and is received prior to the opening hour and date specified.				
12. ACCOUNTING AND APPROPRIATION DATA (If required)				
13. THIS ITEM APPLIES ONLY TO MODIFICATIONS OF CONTRACTS/ORDERS. IT MODIFIES THE CONTRACT/ORDER NO. AS DESCRIBED IN ITEM 14.				
A. THIS CHANGE ORDER IS ISSUED PURSUANT TO: (Specify authority) THE CHANGES SET FORTH IN ITEM 14 ARE MADE IN THE CONTRACT ORDER NO. IN ITEM 10A.				
B. THE ABOVE NUMBERED CONTRACT/ORDER IS MODIFIED TO REFLECT THE ADMINISTRATIVE CHANGES (such as changes in paying office, appropriation date, etc.) SET FORTH IN ITEM 14, PURSUANT TO THE AUTHORITY OF FAR 43.103(B).				
C. THIS SUPPLEMENTAL AGREEMENT IS ENTERED INTO PURSUANT TO AUTHORITY OF:				
D. OTHER (Specify type of modification and authority)				
E. IMPORTANT: Contractor <input type="checkbox"/> is not, <input type="checkbox"/> is required to sign this document and return _____ copies to the issuing office.				
14. DESCRIPTION OF AMENDMENT/MODIFICATION (Organized by UCF section headings, including solicitation/contract subject matter where feasible.) REQUEST FOR QUOTATIONS, W912DR-04-T-0061 FOR BARGE REPLACEMENT FOR THE U.S. ARMY CORPS OF ENGINEERS IS AMENDED TO REFLECT CHANGES TO THE SPECIFICATIONS FOR THE PAINTING OF THE BARGE PER THE ENCLOSED SUMMARY OF CHANGES.				
Except as provided herein, all terms and conditions of the document referenced in Item 9A or 10A, as heretofore changed, remains unchanged and in full force and effect.				
15A. NAME AND TITLE OF SIGNER (Type or print)		16A. NAME AND TITLE OF CONTRACTING OFFICER (Type or print)		
		TEL: _____ EMAIL: _____		
15B. CONTRACTOR/OFFEROR	15C. DATE SIGNED	16B. UNITED STATES OF AMERICA	16C. DATE SIGNED	
_____ (Signature of person authorized to sign)		BY _____ (Signature of Contracting Officer)	10-May-2004	

SECTION SF 30 BLOCK 14 CONTINUATION PAGE

SUMMARY OF CHANGES

SECTION SF 1449 - CONTINUATION SHEET

SOLICITATION/CONTRACT FORM

The required response date/time has changed from 12-May-2004 11:00 AM to 14-May-2004 11:00 AM.

The following have been added by full text:

REVISED SPECS

(See Noted Changes on Page C-10)

PART I - THE SCHEDULE - SECTION C
DESCRIPTION/SPECIFICATION/WORK STATEMENT

INDEX

<u>C000</u>	<u>GENERAL</u>	3
<u>C001</u>	<u>DESCRIPTION</u>	3
<u>C002</u>	<u>PRINCIPAL CHARACTERISTICS</u>	3
<u>C003</u>	<u>DESIGN STANDARDS</u>	3
<u>C004</u>	<u>CLASSING AND CERTIFICATION</u>	4
<u>C005</u>	<u>SCOPE OF WORK</u>	4
<u>C006</u>	<u>VESSEL IDENTIFICATION</u>	4
<u>C010</u>	<u>DEFINITIONS</u>	5
<u>C025</u>	<u>CONTRACTOR QUALITY STANDARDS</u>	5
<u>C300</u>	<u>STRUCTURE</u>	8
<u>C305</u>	<u>HULL STRUCTURE</u>	8
<u>C400</u>	<u>OUTFIT</u>	9
<u>C405</u>	<u>ANODES</u>	9
<u>C406</u>	<u>COATING SYSTEM</u>	9
<u>C410</u>	<u>HULL OUTFIT AND FITTINGS</u>	14

C000 GENERAL

C001 DESCRIPTION

The U.S. Army Corps of Engineers, [Baltimore District](#), has issued this solicitation for acquisition of a welded steel barge in support of its civil works maintenance and repair missions. The vessel shall be a flat deck type barge and will be used primarily as a debris barge.

The vessel shall be constructed in accordance with the provisions of this specification, and as shown on the Contract Drawings.

The Contract drawings provided reflect the as-built drawings for a previously constructed debris barge.

The intent of this contract is to build a debris barge in accordance with the Contract drawings.

C002 PRINCIPAL CHARACTERISTICS

Length (Overall).....	40' - 0"
Beam (Overall).....	18' - 0"
Depth (Molded, at side)	3' - 8"
Bow	Raked
Stern	Raked

C003 DESIGN STANDARDS

The vessel to be provided under this contract shall be constructed in accordance with the as-built drawings, and rules, regulations and standards of the following Regulatory Agencies (latest edition) and other organizations (latest edition) as noted in the individual specifications sections:

- American Bureau of Shipping, "Rules for the Construction and Classing Steel Vessels for Service on Rivers and Intracoastal Waterways."
- ABS Guide for Shipbuilding and Repair Quality Standard for Hull Structures During Construction.
- U.S. Army Corps of Engineers, Publication No. EM 385-1-1 (Nov. 2003) "Safety and Health Requirements Manual."
- American Welding Society, "Guide for Steel Hull Welding."

C004 CLASSING AND CERTIFICATION

Vessel classification and/or certification by ABS is not required. Vessel inspection by the U.S. Coast Guard is also not required.

C005 SCOPE OF WORK

The Contract Drawings listed below represent “As-Built” drawings of an identical, previously constructed debris barge. These drawings and this specification shall be used by the Contractor to construct the vessel. The Contractor shall use the Contract Drawings to prepare one complete set of “As-Built” drawings for the vessel.

CONTRACT DRAWINGS

<u>DWG NO.</u>	<u>TITLE</u>	<u>REV</u>
USCEBD-001	LINES AND OFFSETS	2
USCEBD-002	OUTBOARD PROFILE	3
USCEBD-003	GENERAL ARRANGEMENT	3
USCEBD-004	MIDSHIP SECTIONS & SCANTLINGS	2
USCEBD-005	MISC. SECTIONS AND DETAILS	1

C006 VESSEL IDENTIFICATION

The barge to be acquired through this solicitation shall be designated as BD-1.

C010 DEFINITIONS

The following definitions are applicable to phrases and acronyms used throughout this contract.

- ABS – American Bureau of Shipping
- ASTM – American Society for testing and Materials
- AWS – American Welding Society
- COR - Contracting Officer's Representative - a member of the contract management and quality assurance team authorized by the Contracting Officer to perform certain administrative and managerial duties. A copy of the COR's designation letter will be furnished to the Contractor.
- KO - Contracting Officer - A person with the authority to enter into, modify, administer and/or terminate contracts and make related determinations and findings.
- QC - Quality Control. Quality Control is a function of the Contractor. Refer to clause E03. Quality Assurance (QA) is a function of the Government.
- USACE - Acronym for United States Army Corps of Engineers.

C025 CONTRACTOR QUALITY STANDARDS

The Contractor shall be responsible for the construction of a complete and functioning vessel. The contractor shall utilize the specified components so as to meet detailed specification requirements utilizing construction and testing methods to ensure that the complete vessel shall conform to the intended design.

Inspection by the U.S. Army Corps of Engineers Baltimore District, and other USACE support personnel, is for the purpose of verifying the proper function of the contractor's quality assurance measures and is not to be used as a substitute for in-process control in quality by the contractor.

a. Structural Materials

All structural hull material shall be in accordance with the following specifications:

- Steel Plates, Shapes, Ordinary Strength and Castings - ABS "Rules for Building and Classing Steel Vessels" (latest edition).
- Welding Materials - ABS "Approved Welding Electrodes, Wire-Flux and Wire Gas Combination."
- Bolts, Nuts and Screws - ASTM A307-82, Specification for Carbon Steel Externally and Internally Threaded Standard Fasteners.

b. Standard Parts and Materials

All articles, fittings, equipment, machinery, supplies, and materials used in the construction and outfitting of the vessel shall be of the highest grade, free from defects and imperfections, unused and, be the standard product of reputable manufacturers, to be the maximum extent practicable.

Any material not specified shall be the best available for the purpose intended.

Materials specified herein to meet the requirements of standard specifications published by national authorities shall conform with the respective editions, including amendments, specified.

No salvage materials shall be used in the work.

c. Workmanship

All workers shall be specially skilled for each kind of work assigned and under competent direction. Where work of one trade joins, passes through or is on other work, there shall be no discrepancy or misfit when completed.

In engaging one work with another, there shall be no discrepancy or misfit when completed. In engaging one kind of work with another, marring or damaging of previously acceptable construction shall be cause for rejection.

All parts of the vessel intended to join or bear upon other parts shall have complete and solid contact and shall fit together without excessive cold work during erection. Shims or liners shall not be used for the purpose of overcoming a bad fit.

Lightening holes may be punched or flame-cut and all edges shall have burrs removed. Holes in members having sharp curvature shall be avoided.

d. Welders

Only welders who have successfully passed the qualification tests of the American Bureau of Shipping or other regulatory bodies acceptable to ABS shall perform welding under this contract.

The contractor shall bear the expense of conducting these tests and shall certify, by name to the Contracting Officer, welders who have successfully passed the prescribed tests and hold current, valid certifications.

The contractor shall require any welder to repeat these tests when in the opinion of the Contracting Officer's Representative, the work of the welder indicates a reasonable doubt of his proficiency. In such cases the welder shall be disqualified from any welding under the contract until he has successfully passed the retest.

The contractor shall maintain records of each welder's certification during the course of the contract. The records are to be available for examination upon request of the Contracting Officer or his representative.

e. Welding

All welding shall be in accordance with the current rules of the American Bureau of Shipping. Where welds shown on the drawings exceed ABS standards the drawings shall govern.

All welding equipment used on the work shall be of a modern type subject to close control. ABS approved electrodes shall be used throughout the work and shall be suitable for use with the parent metal at each weld. Electrodes shall be received on the work in unbroken packages bearing the manufacturer's label.

Assembly of all welded joints before welding shall be such as to secure proper gaps in butt welds and metal-to-metal contact in fillet welds. Welding shall not be used to close openings or fill gaps larger than those stipulated for each plate thickness by the American Bureau of Shipping.

Welding procedures, as to direction, length, numbers and sequence of beads, shall be carefully planned to minimize lock-up stresses. Care shall be exercised to produce smooth even beads, especially on all exposed plating and fittings. Beads shall be ground where directed by the Contracting Officer or his authorized representative.

f. Installation

Materials and equipment shall be installed in accordance with the approved recommendations of the manufacturer, and in compliance with the contract documents. Workmen skilled in this type of work shall accomplish the installation.

g. Plate Fairness

Steel plating shall be installed using proper welding procedures and sequences to insure fair, undistorted plating panels. The use of filler materials to surface unfair areas is not acceptable. Plate fairness shall be in accordance with the referenced ABS Guide. Refer to Clause C003.

h. Construction Standards

The contractor shall conform to the referenced ABS Rules and ABS Guide, as if the vessel were being classed. Refer to Clause C003.

All material and equipment shall be new, shall be suitable for the marine service intended, and spare parts and service shall be readily obtainable.

All material, unless otherwise specified in these specifications or in the drawings, shall be commercial quality to ASTM, ANSI, or SAE specifications.

During construction and before delivery, the contractor shall be responsible for protection of all material, equipment, etc., intended for the vessel.

The overweight tolerance of steel members shall be within the limits defined by the specifications of the American Society for Testing and Materials.

All materials shall be free of imperfections due to manufacturing processes and from defects, which adversely affect appearance or serviceability. All sharp edges or projections, which constitute a personnel hazard, shall be removed. All notches shall be radiused.

C300 STRUCTURE

C305 HULL STRUCTURE

Hull construction shall be in strict and total compliance with the contract drawings listed in Clause C005 of this contract.

Scantlings have been selected to meet the ABS requirements. All weld sizes shall be as required by ABS except as shown on the contract drawings.

The plate thickness and scantlings shown on the contract drawings are based upon commercially available plate thickness and structural shapes.

The shell and main deck plating shall be constructed of longitudinal strakes of lengths consistent with accepted practice for hulls. All seams shall be connected with full penetration welds.

All welding shall be performed in accordance with AWS and ABS specifications and procedures.

C400 OUTFIT

C405 ANODES

Brackets shall be welded to the hull exterior sides and ends, to allow for installation of Type 2SS zinc anodes 3"x12"x 1 ¼". Four anodes shall be provided and installed on each vessel side, port and starboard. Two anodes shall be provided and installed at each end.

Zinc anodes shall be carefully masked and protected from paint and abrasive blasting. This protective covering shall be removed from all anodes prior to launching.

C406 COATING SYSTEM

a. Surface Preparation

Surface preparation for all structural steel shall be in accordance with Steel Structures Painting Council Standards, SSPC-SP10-85 (Near White Metal Blast) throughout. Profile after blasting shall be 1-1/2 to 2-1/2 mils in depth and jagged. All mill scale, weld spatter, dirt, oil, and grease shall be removed.

Immediately upon completion of surface preparation, all steel shall be coated with the coating system described in the following.

Contractor may limit initial coating to base coat only at his discretion. In this case, or in the case of pre-construction primer, prior to application of subsequent coats, all steel shall be sand swept clean (light blast) or water blasted and any damaged areas repaired prior to application of the remainder of the system. All areas needing repair shall be cleaned to bare metal, spot blasted to restore profile, and re-coated with the base coat or pre-construction primer.

b. Paint Requirements

Paint shall be delivered in sealed containers with labels to indicate manufacturer, contents, and any special instructions. Paints and painting materials shall be stored under cover and protected from extreme temperatures.

Paints, which have exceeded the closed shelf life or pot life recommended by the manufacturer, shall not be used. Additionally, paints shall not be applied in weather or humidity conditions not recommended by the manufacturer.

The Contracting Officer reserves the right to require the Contractor to submit one-quart samples of any paint used for testing and approval. Notice shall be given to the COR 30 days in advance of any painting for this purpose.

c. Application of Coatings

Surface preparation and paint application shall be in strict compliance with the coating manufacturer's recommendations. The contractor shall take particular care to insure that coating system requirements are met in all areas, especially those difficult to coat, such as flange undersides. All painting on both the interior and exterior surfaces below the main deck shall be accomplished prior to launching of the vessel.

d. Coating System

The system is composed of the following coating types:

- self priming epoxy base coat
- abrasion resistant epoxy barrier coat
- fade resistant urethane top coat

e. Pre-qualified Coatings

Coating systems from Ameron, BLP Mobile, International, and Finnaren & Haley have been pre-qualified for the system above. The contractor may select any of the systems at his discretion. However, systems may not be "mixed." The specific coating designations to be used are as follows:

Surface Tolerant Base Coat

- a. Ameron Amercoat 370
- b. Amercoat 235 (formerly Devoe Bar Rust 235)
- c. BLP Mobile MOPOXY-PLUS
- d. International INTERTUF 262 (use INTERGARD 403 for Ballast Tanks)
- e. Finnaren & Haley INDULON 235 (use INDULINE 891 UHS for Ballast Tanks)

Abrasion Resistant Epoxy Barrier Coat

- a. Ameron Amerlock 400GF
- b. Amercoat 238 (formerly Devoe Devguard 238)
- c. BLP Mobile MOPOXY-PLUS FG
- d. International INTERSHIELD 350
- e. Finnaren & Haley INDULON 882 Abrasion Resistant Epoxy

Fade Resistant Urethane Top Coat

- a. Ameron Amercoat 450 HS
- b. Amercoat 369 (formerly Devoe Devthane 369)
- c. BLP Mobile MOTHANE HS-900
- d. International paint system requires:
 - 1) INTERGARD 267 (for exterior Hull below the Waterline)
 - 2) INTERTHANE 990 (for exterior Hull surfaces, other than those below the Waterline)
- e. Finnaren & Haley INDURATHANE 890 (above the waterline)

f. Number of Coats

The number of coats is not specified. The Contractor is required to provide the number of coats necessary to attain the DFT thicknesses required in the schedule below. Thickness applied per coat may not exceed the manufacturer's recommended maximum thickness.

The "under coats" of all multiple coat applications may be "contrast tinted" to ensure complete coverage of successive coats.

g. Coating "Type" and DFT Schedule

All areas of the vessel in accordance with the following schedule:

(1) Hull Interior

All steel surfaces shall be coated with base coat at 8 mils DFT minimum.

(2) Hull Exterior

All steel surfaces ~~except the deck~~ shall be coated with base coat at 6 mils DFT minimum.

~~Deck areas shall be coated with base coat at 6 mils DFT minimum.~~

All surfaces ~~except the deck~~ shall be overcoated (over the base coat) with barrier coat at 12 mils DFT minimum (not including base coat).

Non-skid additive shall be added to the last barrier coat on all deck areas.

Hull exterior above light waterline and decks shall be topcoated (over the barrier coat) with 6 mils DFT of fade resistant urethane topcoat.

Lettering and numerals above water shall be overcoated (over the barrier coat) with **topcoat** at 4 mils DFT minimum.

h. Coating Color Schedule

Colors shall conform to Federal Standard 595a(3) Colors Identification Numbers. Color chips (3" x 5") may be produced from the Naval Publications and Forms Center, 5801 Tabor Road, Philadelphia, PA 19120 (215-697-3321). The coloring schedule shall be as follows:

<u>AREA</u>	<u>COLOR/FS595 NUMBER</u>
Deck Fittings	Yellow/13655
Hull Exterior	Black/17038
Hull Interior	White/27880
Hull Markings	White/27880
Decks	Deck Red/10076

On all deck areas, both **under coat** (barrier coat for hull and base coat for decks other than hull) and **topcoat** shall be colored Deck Red.

All top coat thicknesses shall be sufficient to provide complete opaque color coverage. Thicknesses increased over the DFT minimums required above shall be provided if required for opaque color coverage.

i. Final Inspection of Painting

The Contractor is responsible for delivering the vessel with all painted surfaces in sound condition, and in accordance with this specification.

Prior to launching of the vessel, all interior and exterior painting shall be thoroughly inspected, and any defects or damage in the coating shall be repaired by the Contractor as necessary to restore the integrity of the paint system, and to meet the requirements of this specification. All damage shall be cleaned to bare metal, spot blasted to restore profile, and re-coated with the entire system schedule.

If outfitting is required after launching, all interior and exterior painting shall be re-inspected prior to Provisional Acceptance, and any damaged areas of the coating shall be repaired by the Contractor as necessary to restore the integrity of the paint system.

Any additional painting required as a result of the Final Inspection shall be done as required to meet this specification at no additional cost to the Government.

j. Documentation and Warranty

Documentation

The contractor shall provide a written signed statement certifying that all coating application and surface preparation are in accordance with the coating system manufacturer's requirements, and that the coating application meet all requirements in this specification.

The contractor shall provide documentation logs for each coating applied. The logs shall include the following parameters:

1. Coating (per specification) type,
2. Coating manufacturer's requirements for preparation, environmental conditions and application.
3. Date and time.
4. Extent and location of area coated.
5. Surface: preparation, temperature, and dew point at time of coating.
6. DFT measurements for each applied coating type. Measurements shall be taken on a uniform grid in the areas required. Measurements shall be taken as follows:
 - all flat surfaces, one reading per every 200 square feet, uniformly distributed.
 - undersides of all flanges, 10 readings per compartment, uniformly distributed.
 - all free standing structural members, (i.e., stanchions, truss diagonals, etc.), 10 readings per compartment.Wet film measurements may be taken and converted to DFT as an alternative to direct DFT. In areas where multiple coating types are required, the above DFT requirements are applied to each coating type.
7. Services provided by paint manufacturer's representative (i.e., DFT readings, dew point, etc.), if present during application.
8. Signature of paint manufacturer's representative on site, if present.

Warranty

The contractor shall warranty the coating system for one calendar year, commencing at final acceptance. The contractor shall repair any coating failures during this time period at his cost.

k. Safety and Health Standards

The U.S. Occupational Safety and Health Agency Standards (OSHA) for shipyard employees engaged in surface preparation and coatings application shall be in accordance with the OSHA regulations stated in 29 CFR 1915.31-36.

These regulations require the Contractor to have access to a "competent person" to test compartment atmosphere quality.

The regulations also require that frequent testing of the atmosphere shall be made in compartments being coated or preserved (or prepared for coating or preservation) by paints and coatings dissolved in highly volatile, toxic and flammable solvents (29 CFR 1915.35(b)), to insure the atmosphere is not hazardous.

Each compartment inspection and test shall be logged on OSHA Form 74, with instructions on how to maintain a safe atmosphere in these spaces until the completion of the contract.

Within 24-hours of final inspection, and before any representative of the U.S. Government boards the vessel for inspection, each compartment or space to be inspected shall be certified "SAFE FOR WORKERS" by a National Fire Protection Association (NFPA) certified Marine Chemist. This means that in the compartment or space so designated:

1. The oxygen content in the atmosphere is at least 19.5 percent and below 22 percent by volume;
2. Toxic materials in the atmosphere are within permissible concentrations;
3. The residues are not capable of producing toxic materials under compartment atmospheric conditions while maintained as directed on the Marine Chemist's certificate.

The Contractor shall notify the Government when this certificate has been issued for each compartment. The vessel will not be inspected and accepted by the Government without an NFPA Marine Chemist certificate for each compartment designated "SAFE FOR WORKERS".

C410 HULL OUTFIT AND FITTINGS

a. Deck Fittings

The Contractor shall furnish and install deck fittings for the barge, types and locations as indicated on the contract drawings. All fittings are to be welded by continuous fillet welds.

b. Manholes

The Contractor shall provide flush, watertight, NABRICO 18-inch diameter, single bolt manholes, located as shown on contract drawings. All manhole covers shall be fitted with chain or cable retaining devices on the under deck side.

c. Fenders

A steel fendering system consisting of Schedule 80 split steel pipe shall be provided around the entire perimeter of the barge, as shown on the contract drawings.

Fenders shall be continuous seal welded to hull plate all around. All welding shall be free of slag and ground smooth on fenders and adjacent surfaces.

d. Docking Plugs

Two bronze docking plugs, with two-inch diameter pipe threads, shall be fitted in each hull compartment. The docking plugs shall be threaded into steel pads (collar/ pipe coupling) welded to the inside surface of the bottom plating and shall be flush with the outer surface of the plating. The pads shall be slotted to provide drainage to the docking plugs. Plugs shall be recessed in the outer ends for a square bar wrench and shall be removable from the outside. Each plug shall be fitted with a retaining chain and staple welded to the pad. For docking plug construction details, see Detail 4-5-7 of Contract Dwg. No. USCEBD-005, "Misc. Sections and Details".

C460 INSIGNIA AND MARKINGS

All hull markings shall be Arabic numerals, and block type letters cut from ¼ inch steel plate, and attached to the hull with light continuous welds.

Draft marks shall be 6 inches high, located on the hull sides as shown on the Contract Drawings. The draft marks shall indicate each foot of draft from the 1-foot water line to the 3-foot water line and be measured from the underside of the bottom plating projected to the bottom of each numeral.

Owner markings in 4-inch high letters, consisting of the words "CORPS OF ENGINEERS - U.S. ARMY" shall be located as shown on the Contract Drawings. Name markings in 4-inch high letters, consisting of the vessel name listed in Clause C006, Vessel Identification, shall be located at the locations as shown on the Contract Drawings.

Confined space markings shall be stenciled on all entrances and shall read as follows:

**DANGER
PERMIT REQUIRED
CONFINED SPACE
DO NOT ENTER**

(End of Summary of Changes)